

PATENT
Customer No. 22,852
Attorney Docket No. 5711.0068-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
Shunji AKASHI) Group Art Unit: 1732
Serial No.: Unassigned) Examiner: E. Lee
Continuation of Serial No.: 09/404,900)
Filed: September 24, 1999)
For: SNAP FASTENER WITH TAPE)
AND MANUFACTURING)
METHOD AND MOLD OF THE)
SAME)

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

PRELIMINARY AMENDMENT

Prior to the examination of the above application, please amend the application as follows:

IN THE CLAIMS:

Please add new Claims 15-18 as follows:

15. (New) A manufacturing method of a snap fastener with tape for integrally molding a male or female button made of synthetic resin on front and back faces of tape such that the male or female button holds a peripheral edge of an attachment hole of the tape having at least one attachment hole, comprising the steps of:

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fixing the tape with the attachment hole in position between cavities of a fixed mold and a movable mold;

closing the movable mold against the fixed mold and clamping a tape portion of the peripheral edge of the attachment hole by at least a pair of clamping members projecting to face each other in the cavities of the molds;

forming an introducing passage for introducing molten resin through a center portion of the attachment hole of the tape and at least one molten resin guide passage for supplying the molten resin linearly from the introducing passage as a center toward the peripheral edge of the attachment hole;

connecting a portion of the cavities for forming at least one cut-out recessed in a diameter direction of an engaging opening at a center portion of the snap fastener with said at least one molten resin guide passage; and

injecting the molten resin into the cavity through the molten resin guide passage toward the peripheral edge of the attachment hole of the tape.

16. (New) A manufacturing method according to claim 15, wherein a molten resin outlet portion of the molten resin guide passage is directed to a position of the tape clamped by the clamping members.

17. (New) A manufacturing method according to claim 15 or 16, wherein the snap fastener is a female member comprising the female button which has the engaging opening at a center portion of the female button and which is integrally molded on the tape, and the method further includes the steps of:

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forming a molten resin outlet portion of the molten resin guide passage to project and open inside the cavity;

forming the respective molten resin guide passage independently; and fracture removing a molded portion of the molten resin guide passage connected to a bottom portion of the cut-out formed by the molten resin outlet portion in a diameter direction of the female button in a portion of an inner peripheral engaging face of the engaging opening, by engaging an engaging portion of the male button with the engaging opening of the female button.

18. (New) A manufacturing method according to claim 15 or 16, wherein the snap fastener is a male member comprising the male button which is in a substantially T-shape in section, and has an engaging portion to be engaged with the female button at a center portion of the male button, and which is molded integrally with the tape, and the method further includes steps of forming the introducing passage to directly open into a cavity face opposite to a cavity face for molding the engaging portion to form the opening, forming in the same opposite cavity face at least one or more molten resin guide passages having at least one wedge-shaped recessed groove with an end communicating with the opening of the introducing passage and a tip end thereof directed to the peripheral edge of the attachment hole of the tape, forming the opening near a plane including the attachment hole of the tape, and fracturing and removing a molded portion of the introducing passage.

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REMARKS

In this Amendment, original Claims 1-14 have been canceled without prejudice or disclaimer, and new Claims 15-18 have been added. No new matter has been added by any of the new claims. It is submitted that these new claims more particularly define the protection for the present invention to which Applicants are entitled.

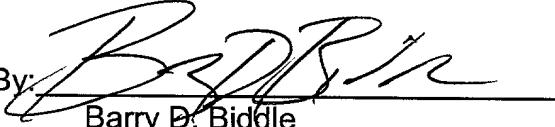
If there is any fee due in connection with the filing of this Preliminary Amendment, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: March 4, 2002

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